SAVING OUR BAYS: OUR CHALLENGE, OUR CHOICE[i]

Approach 1	Approach 2	Approach 3
Act Now: Take immediate action to address the obvious degradation of the Inland Bays.	**Use Science and Cents: Base strategies on scientific evidence and analysis of costs and benefits.**	**Let's fix it: Make existing laws and programs work.**
What can be done ♦Designate the Inland Bays and watershed as endangered areas that require special regulatory attention. ♦Mandate a property tax reassessment so both new and longtime residents pay their fair share of environmental costs. ♦Develop a fertilizer management plan that vigorously ensures that nutrients, including animal waste, do not contaminate ground or surface waters.	**What can be done** ♦Take no action until scientific consensus on existing data is attained. ♦Create new studies that look at historical, chemical, physical, and biological factors. ♦Analyze costs of specific strategies and compare those costs to the amount of nutrient reduction they cause.	**What can be done** ♦Fix inconsistencies in federal, state, county and local laws, regulations and programs. ♦Place a high priority on enforcement of clear regulations. ♦Develop economic incentives.
In support ♦We have a moral obligation not only for ourselves but for future generations. ♦Current regulations do not work. ♦We must protect property values, safeguard human health and the resort economy.	**In support** ♦We need to understand the complex causes and specific sources of water pollution in the bays. ♦It is just common sense to figure out the true costs of proposed anti-pollution strategies. ♦Pollution strategies could easily result in the loss of an industry.	**In support** ♦Coordination by government would allow all participants to know the rules. ♦It would be less costly than developing new regulations. ♦It makes sense to fine-tune rather than reinvent the wheel.
In opposition ♦Restrictive land-use policies have severe impact on economic vitality and may conflict with property rights. ♦Increased regulations cost regulators and the regulated time and money. ♦Aggressive action without sound science is a foolhardy approach.	**In opposition** ♦Scientific consensus may take years to achieve. ♦Cost-benefit analyses are costly and time-consuming and may not change decision-making. ♦Action is needed now.	**In opposition** ♦This approach hasn't worked so far. ♦Increased enforcement is another expense on the taxpayer. ♦This idea is too little, too late.
Trade-off Are we willing to mandate stricter land-use regulations, even if they may create economic hardship for property owners who want to develop their properties?	**Trade-off** Are we willing to allow economics and irrefutable science to direct the development of pollution-control strategies, even if this would mean that action would be delayed for several years while the bays become more polluted?	**Trade-off** Should we rely on improving the existing pollution-control strategies, even if history shows that they have been ineffective at making the bays fishable and swimmable?

The Situation: Non-point Pollution in Delaware's Inland Bays

By the late 1990's the State of Delaware was facing serious pollution in its inland bays. In 1997, *Pfiesteria*, a sometimes toxic microorganism that can cause lesions on fish and may cause sickness in humans, was found in a local bay. Scientific studies showed a clear link between *Pfiesteria* and excess nutrients in the water. On popular beaches, prevailing winds were blowing and depositing huge quantities of dead foul-smelling seaweed, a result of excess nitrogen and phosphorus in the water. In the summer of 1998, excess nitrogen and phosphorus caused a massive algae bloom known as "red tide." This led to a loss of desirable aquatic vegetation, and a degradation of finfish and shellfish habitat. Also in 1998, thousands of clams died as a result of oxygen deficiencies caused by the accumulation and decomposition of "sea lettuce" in a bay.

The excess nitrogen and phosphorus resulted from non-point pollution in the watersheds from activities such as farming, lawn fertilizing, septic system use, and poultry production. Government officials and agencies began work on the issues, and the Center for the Inland Bays and the Delaware Department of Natural Resources and Environmental Control asked teams of citizens throughout the inland bays area to develop strategies for controlling pollution. Called "Tributary Action Teams," they consisted of a wide range of average citizens who were willing to work with the challenges. They utilized the issue framing/public deliberation model and wrote an informative issue guide that briefly described the problem in ways the average citizen would understand. Here is how they presented the issue in their guidebook. It is typical of the wording used to present an issue in the National Issues Forum format.

> In order to develop strategies that will have wide public support, the Tributary Teams are asking their fellow citizens to discuss a variety of approaches to the water-pollution problem. Those approaches are outlined in the following pages. The approaches, though different, are not mutually exclusive. You will probably find some elements of each approach that you like, and some that bother you—that's part of the process of discovering the many difficult choices we will have to make while developing water-pollution controls.
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> Although each approach is presented theoretically, the strategies they include are based on real ideas that have been under discussion—in some cases, for years. Each approach is based on a strongly stated set of values, and those values are the driving force behind the strategies each approach advocates. The three approaches we will discuss are based on these beliefs.
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> You are not expected to choose one approach over another – in fact, we would be surprised if you found any one approach to be without fault. We hope that by discussing these various approaches, and the values on which they are based, we will begin to see the challenge before us.

Outcomes of the Forums and Public Deliberation

Ninety-one citizens participated in five forums. They were asked to sort out what was important to them, determine what the costs and benefits of actions might be, and to come to a better understanding of the complexity of the problem. They were not asked to come up with a quick list of actions. The citizen input was to help the Tributary Action Teams develop effective pollution-control strategies that would have broad public support. Public deliberation was a means to the desired broad public support.

The Tributary Action Teams met three times after the forums were completed to develop pollution control strategies based on the public discussion. After reviewing and analyzing the information, they reached consensus on five topics for action: pollution trading, endangered areas, land use planning, fertilizer management, and governmental inconsistencies. The final draft of their strategies was sent to the Delaware Department of Natural Resources and Environmental Control for technical review in June 2001.

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[i] Saving Our Bays: Our challenge, our choice. The Inland Bays Tributary Strategy Program coordinated by the Center for the Inland Bays in cooperation with the U.S. Environmental Protection Agency, the Delaware Department of Natural Resources and Environmental Control and the University of Delaware's Cooperative Extension Agency and Sea Grant Marine Advisory Service.